

08/943, 399

FILE 'USPAT' ENTERED AT 11:40:14 ON 26 AUG 1998

* W E L C O M E T O T H E *
* U . S . P A T E N T T E X T F I L E *

=> s oxygenate#

L1 11010 OXYGENATE#

=> s light olefin#

635568 LIGHT
61738 OLEFIN#
L2 1063 LIGHT OLEFIN#
(LIGHT(W) OLEFIN#)

=> s heavy hydrocarbon#

215213 HEAVY
203391 HYDROCARBON#
L3 3226 HEAVY HYDROCARBON#
(HEAVY(W) HYDROCARBON#)

=> s l1 and l2 and l3

L4 55 L1 AND L2 AND L3

=> s l4 and 585/clas

25344 585/CLAS
L5 27 L4 AND 585/CLAS

=> s l5 and 585/640/ccls

374 585/640/CCLS
L6 3 L5 AND 585/640/CCLS

=> d 1-

1. 4,684,756, Aug. 4, 1987, Process for upgrading wax from Fischer-Tropsch synthesis; W. Rodman Derr, Jr., et al., 585/330; 518/700, 705; 585/314, 315, 408, 469, 640 [IMAGE AVAILABLE]

2. 4,633,028, Dec. 30, 1986, Process for converting oxygenates to alkylated liquid hydrocarbons; Hartley Owen, et al., 585/331, 315, 316, 640, 709, 723 [IMAGE AVAILABLE]

3. 4,497,968, Feb. 5, 1985, Multistage process for converting olefins or oxygenates to heavier hydrocarbons; Bernard S. Wright, et al., 585/304, 319, 413, 415, 533, 640 [IMAGE AVAILABLE]

=> s l5 and 585/639/ccls

264 585/639/CCLS
L7 0 L5 , 585/639/CCLS

=> s 15 and 585/638/ccls

246 585/638/CCLS
L8 0 L5 AND 585/638/CCLS

=> d 15 1-

1. 5,347,064, Sep. 13, 1994, Multiple split feed isoparaffin-olefin alkylation; Jonathan E. Child, et al., **585/716, 714, 717, 726** [IMAGE AVAILABLE]
2. 5,264,635, Nov. 23, 1993, Selective cracking and etherification of olefins; Quang N. Le, et al., 568/697; **585/310, 324, 643** [IMAGE AVAILABLE]
3. 5,243,121, Sep. 7, 1993, Fluid catalytic cracking process for increased formation of isobutylene and isoamylenes; Rostam J. Madon, et al., **585/649; 208/120, 122; 585/653** [IMAGE AVAILABLE]
4. 5,233,101, Aug. 3, 1993, Fluidized catalyst process for production and hydration of olefins; Mohsen N. Harandi, 568/897, 899; **585/648, 752** [IMAGE AVAILABLE]
5. 5,146,029, Sep. 8, 1992, Olefin interconversion by shape selective catalysis; Robert G. Bundens, et al., **585/533, 520, 649, 666** [IMAGE AVAILABLE]
6. 5,110,446, May 5, 1992, Integrated products separation from fluid catalytic cracking and aromatization processes; Mohsen N. Harandi, et al., 208/100, 49, 70, 92, 93, 94, 103, 134, 135; **585/300, 314, 315, 322, 413** [IMAGE AVAILABLE]
7. 5,082,983, Jan. 21, 1992, Reduction of benzene content of reformat in a catalytic cracking unit; Lloyd L. Breckenridge, et al., **585/475; 208/66, 111, 113, 120; 585/410, 467, 940** [IMAGE AVAILABLE]
8. 5,059,744, Oct. 22, 1991, Reactor and recovery system for upgrading lower olefins; Moshen N. Harandi, et al., **585/314, 315, 316, 322, 415, 533** [IMAGE AVAILABLE]
9. 5,055,176, Oct. 8, 1991, Multi component catalyst and a process for catalytic cracking of **heavy hydrocarbon** feed to lighter products; Joseph A. Herbst, et al., 208/120; **585/407, 739** [IMAGE AVAILABLE]
10. 5,009,851, Apr. 23, 1991, Integrated catalytic reactor system with **light olefin** upgrading; Amos A. Avidan, et al., 422/141; 208/71; 422/142, 144, 234; **585/330** [IMAGE AVAILABLE]
11. 4,990,712, Feb. 5, 1991, Integrated cracking, etherification and olefin upgrading process; Mohsen N. Harandi, et al., **585/324; 44/309, 446, 448; 568/697, 699; 585/310, 314, 315, 322, 328, 329, 830, 860** [IMAGE AVAILABLE]
12. 4,973,790, Nov. 27, 1990, Process for upgrading light olefinic streams; James H. Beech, Jr., et al., **585/533; 208/70; 585/330, 518** [IMAGE AVAILABLE]
13. 4,966,680, Oct. 30, 1990, Integrated catalytic cracking process with **light olefin** upgrading; Amos A. Avidan, et al., 208/71, 49, 70, 113; **585/322, 330, 533** [IMAGE AVAILABLE]
14. 4,929,337, May 29, 1990, Process for catalytic cracking of **heavy hydrocarbon** feed to lighter products; Joseph A. Herbst, et al.,

208/120, 135; 502/67, 585/407, 739 [IMAGE AVAILABLE]

15. 4,879,428, Nov. 7, 1989, Upgrading lower olefins; Mohsen N. Harandi, et al., 585/533, 314, 315, 316, 322, 329, 415 [IMAGE AVAILABLE]

16. 4,855,521, Aug. 8, 1989, Fluidized bed process for upgrading diene-containing **light olefins**; Amos A. Avidan, et al., 585/415, 533 [IMAGE AVAILABLE]

17. 4,831,203, May 16, 1989, Integrated production of gasoline from **light olefins** in a fluid cracking process plant; Hartley Owen, et al., 585/519, 533 [IMAGE AVAILABLE]

18. 4,822,477, Apr. 18, 1989, Integrated process for gasoline production; Amos A. Avidan, et al., 208/70, 49, 113, 155, 164; 585/322, 407, 431, 533 [IMAGE AVAILABLE]

19. 4,788,366, Nov. 29, 1988, Production of heavier hydrocarbons from **light olefins** in multistage catalytic reactors; Mohsen N. Harandi, et al., 585/314, 301, 303, 312, 315, 415 [IMAGE AVAILABLE]

20. 4,767,604, Aug. 30, 1988, Integrated reactor system for converting **oxygenates** to alkylated liquid hydrocarbons; Hartley Owen, et al., 422/190, 192, 198; 585/312, 314, 331 [IMAGE AVAILABLE]

21. 4,705,908, Nov. 10, 1987, Natural gas conversion process; Oliver M. Gondouin, 585/500, 300, 415, 417, 541, 661, 943 [IMAGE AVAILABLE]

22. 4,684,756, Aug. 4, 1987, Process for upgrading wax from Fischer-Tropsch synthesis; W. Rodman Derr, Jr., et al., 585/330; 518/700, 705; 585/314, 315, 408, 469, 640 [IMAGE AVAILABLE]

23. 4,633,028, Dec. 30, 1986, Process for converting **oxygenates** to alkylated liquid hydrocarbons; Hartley Owen, et al., 585/331, 315, 316, 640, 709, 723 [IMAGE AVAILABLE]

24. 4,626,415, Dec. 2, 1986, Olefin upgrading system for extracted feed; Samuel A. Tabak, 422/190; 208/87; 422/234; 585/329 [IMAGE AVAILABLE]

25. 4,544,788, Oct. 1, 1985, Control system for catalytic conversion of olefins to heavier hydrocarbons; Nicholas Daviduk, et al., 585/501; 208/DIG.1; 422/106, 131, 190; 585/401, 403, 408, 415, 469, 533, 701 [IMAGE AVAILABLE]

26. 4,513,156, Apr. 23, 1985, Olefin oligomerization using extracted feed for production of **heavy hydrocarbons**; Samuel A. Tabak, 585/329, 517, 533 [IMAGE AVAILABLE]

27. 4,497,968, Feb. 5, 1985, Multistage process for converting olefins or **oxygenates** to heavier hydrocarbons; Bernard S. Wright, et al., 585/304, 319, 413, 415, 533, 640 [IMAGE AVAILABLE]